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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

YAO, SAMCHUAN CUA

ART UNIT

PAPER NUMBER

1733

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14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/879,815

Applicant(s)

MOSGAARD CHRISTENSEN ET AL.

Examiner

Sam Chuan C. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-22 is/are pending in the application.
- 4a) Of the above claim(s) 10-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-4 and 6-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because the preamble in this claim appears to be inconsistent with the body of this claim. The body of this claim appear to only require forming a single layer web while the preamble appear to require forming at least a three-layered web. Moreover, it is unclear how the recited "*central layer*" is formed. Where did this layer come from? Is the central layer disposed in "*a web of cellulose fibers*" during a laying process step? In other words, does claim 1 require laying "*a web of cellulose fibers*" having a superabsorbent central layer? If so, how? Moreover, it is suggested for Counsel to cite a passage or passages in the original disclosure for support to the newly claimed subject matter. If Counsel fails to do so, a 112 1st paragraph rejection (i.e. New Matter rejection) will be made.

Claim 6 is indefinite, because this claim appears to be inconsistent with claim 1. There is no sufficient support in the original disclosure in forming a dryformed web comprising a fiber web layer and a superabsorbent central layer, wherein the fiber web includes a homogeneously distributed SAP. It is suggested for

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Counsel to cite a passage or passages for the presently claimed subject matter.

If Counsel fails to do so, a 112 1st paragraph rejection (i.e. New Matter rejection) will be made.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bair (US 5,135,787) in view of Kannankeril et al (US 5,552,169), Franskosky et al (US 5,225,242) and Kennette et al (US 4,612,226).

Bair discloses a method of making an absorbent pad, the method comprises placing a 1st outer non-woven fabric on a conveyor belt, wherein the 1st fabric includes a mixture of heat-activated binder fibers and hydrophilic fibers such as wood-pulp, cellulose acetate, etc. and is also treated with a resin to ensure adequate bonding of the 1st fabric; placing a fibrous central web which contains superabsorbent particles onto the 1st fabric; placing a 2nd outer non-woven fabric onto the fibrous central web to form a three-layered web; and then heating the three-layered web to "soften" the binder fibers and enhance the tensile strength of the pad (col. 4 line 17 to col. 5 line 64). The dryformed paper web recited in claim 1 is taken to read on the outer non-woven fabrics taught by Bair. In any event, it would have been obvious in the art to replace a non-woven fabric with a

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dryformed paper, because: a) it is well known in the art to use a paper as a wicking layer for an absorbent pad so that liquid readily flows into an absorbent core as exemplified in the teachings of Kannankeril et al (col. 4 line 50 to col. 5 line 5); and, b) it is notoriously common practice in the art to form an air-laid paper. Bair is silent on whether the conveyor belt is a forming wire. However, such would have been obvious in the art as such is also notoriously well known in the art. Moreover, it is also unclear how a resin is applied to outer non-woven fabrics. However, it would have been obvious in the art to at least coat the surface of each outer nonwoven fabric, because Frankosky et al teaches resin coating a surface of a non-woven web comprising a blend of fiberfill and binder fibers in order to reduce the level of fiber leakage (abstract; col. 2 lines 35-65). Bair is also silent on: a) the amount of binder fibers, b) amount of dry matter in a resin, and c) amount of dry matter that is applied to an outer fabric.

As for limitation "a" and "b", it would have been obvious in the art to apply the binder on the web in an amount of .5-20 grams (claims 1 and 9) or 0.5-10 grams (claim 3) or 0.5-5.0 grams (claim 8) of dry matter per square meter of the web surface in the process of Bair because, Franskosky et al implicitly suggest coating about 5 g/m^2 or more of the bonding resin onto the surface of the fibrous web to effectively prevent fiber leakage (note: Franskosky et al disclose that the final fibrous web has a weight basis in a range of $50\text{-}400 \text{ g/m}^2$ and further disclose that the bonding resin constitutes about 10-30% by weight of the final batt; 10% of 50 g/m^2 is equal to 5 g/m^2 (col. 2 lines 53-62; col. 3 lines 32-35);

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and, because those versed in the art would have determined, by routine experimentation, the suitable and sufficient amount of binder resin to apply on the web in order to effectively prevent fiber leakage on the web and the same time provide the least amount of resin binder material to reduce the cost of making the outer non-woven fabrics taught by Bair.

As for limitation "c", it would have been obvious in the art to provide a latex resin binder having the amount of dry matter recited in claim 1 or 2 in forming the outer non-woven fabric of Bair, because one in the art would have determined a suitable latex binder composition needed to be applied to the modified process of the APA (i.e. such is taken to be result effective variable routinely optimize by those versed in the art for the desired end-use of the absorbent paper); and because it is old in the art of making cellulose absorbent webs of the type taught by the APA to apply a dilute latex binder where the amount of solid binder is in the range of about .5-5% by weight as exemplified in the teachings of Kennette et al (abstract; col. 1 lines 10-28; col. 3 lines 29-45). Only the expected result of effectively forming an adequately bonded outer non-woven fabric would have been achieved.

With respect to claims 4 and 7, the limitations in these claims are taken to be conventional in the art.

5. Claims 1-4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (APA) in view of Bair (US 5,135,787), either (LeVan (4,869,771) or Frankosky et al (US 5,225,242)), Kennette et al (US 4,612,226) for

reasons of record set forth in Paper No. 11 numbered paragraph 4 and further in view of Bryson (US 4,927,582).

It would have been obvious in the art to provide a superabsorbent central layer in making an absorbent article of the APA as such is old in the art as exemplified in the teachings of Bryson (figure 5). As for claim 6, it would have been obvious in the art to also uniformly distribute SAP in regions of a fiber web that is not part of a superabsorbent central layer as such is old in the art as exemplified in the teachings Bryson (figure 5).

Response to Arguments

1. Applicant's arguments filed 11-29-02 have been fully considered but they are not persuasive.

In response to Counsel's argument on page 6 full paragraph 1 that

*"...thermobinding fibers are used **inside** the product and the binder is used **only** at the surface of the web in **small** amounts in order to binder fiber dust ..."*

(emphasis and bold-face in original), it is respectfully submitted that, Counsel's argument is not commensurate with the scope of the recited claims. There is nothing in the claims which require using "thermobinding fibers" "**inside** the product" and "**only**" using the binder "at the surface of the web in **small** amounts". Equally important, such would have been obvious in the art, because Franksosky et al teaches applying "soft-type resin **coating**" (bold-face and emphasis added) to a fiber web comprising a blend a fiberfill and heat-activated binder fibers to reduce "fiber leakage" (abstract; col. 2 lines 26-65).

In response to Counsel's argument on page 6 paragraph 2 to page 7 regarding the two admitted prior art bonding processes being directed to different articles, it does not change the fact that, in paragraph 0004 of the specification, the APA discloses that *"It is important that the dryformed pulp web be stabilized or bonded. In practice, this is achieved in two different ways, namely by applying binder or by using binding fibers."* Moreover, both Frankosky et al and LeVan clearly disclose the advantage of combining these two conventional ways of bonding a dryformed web. It is respectfully submitted that, one in the art forming a dryformed web of the APA confronted with a fiber leakage problem would have been motivated to incorporate the teachings of Franksosky and/or LeVan.

In response to Counsel's argument on page 8 regarding the limitation in claim 5, Examiner strongly disagrees with Counsel's assertion that, none of the prior art teaches forming a dryformed web having a central layer containing SAP. The central layer as presently recited in a preamble in claim 1 reads on SAP containing web (16) taught by Bair. Moreover, the recited preamble does not appear to give life, meaning and vitality to the limitations recited in the body of the claim. In fact, there is disconnect between the preamble and the body in claim 1 as noted earlier. Equally importantly, such is old in the art as evidence from the teachings of Bryson (figure 5).

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In response to Counsel's argument on page 8 full paragraph 2, Counsel's attention is directed to example 2 on last 2 lines on page 19 to page 20 of Applicant's own specification. The process of making a dryformed web containing a superabsorbent central layer of the present invention is clearly substantially similar to the process taught by Bair. Contrary to Counsel's assertion, the SAP central layer of the present invention is also sandwiched between two outer web layers. As for Counsel's argument on page 9 regarding Bair teaches using a carded web, it does not change the fact that, Bair teaches forming an absorbent pad comprising outer non-woven fabrics by combining the two conventional techniques of the APA to ensure that there is adequate bonding of the fibers in the web. As for Counsel's argument regarding Bair not using "*cellulosic fiber*", as correctly noted by Counsel in a subsequent paragraph, "*wood pulp or cellulose acetate*" is clearly disclosed in the Bair patent; see column 4 lines 54-65, for example. As for Counsel's argument that a wood pulp would be impossible to card, Counsel's argument is off-point. It does not matter whether or not wood pulp can or cannot be carded. The disclosure of Bair as a whole would have suggested to one in the art to use fibers from wood pulp and/or cellulose acetate. Is Counsel suggesting that there is an enablement problem to Patent No. 5,135,787? If so, perhaps Counsel might want to provide some evidence to support Counsel's assertion. As for Counsel's argument that, the outer layers of Bair are not absorbent, because they are used as wicking and distribution layers, it is respectfully submitted that, the outer web layers, especially when hydrophilic

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fibers are used, are capable of absorbing fluid; hence they are absorbent to a certain degree. Moreover, claim 1 as presently recited does not require the cellulose fiber web layer to be absorbent either, but rather a resultant dryformed web which contains an SAP central layer. Note: just like a dryformed web of the present invention, the resultant pad taught by Bair is also absorbent.

In response to Counsel's argument on pages 10-11 that "... *there is no disclosure [in Bair] that a binder fibers should only be provided at the surfaces of the outer fabrics 12 and 14.*" (emphasis & bold-face added and original) and "*there is no deep penetration of the binder*" (emphasis added), once again Counsel's arguments are not commensurate with the scope of the recited claims. The claims as presently recited reads on impregnating a non-woven fabric. In any event, it would have been obvious in the art to coat the surface of each outer non-woven fabric taught by Bair in light of the teachings of the Franskosky patent, which discloses coating surfaces of a nonwoven web to reduce fiber leakage. As for Counsel's argument regarding fiber dusting, as correctly noted by Counsel pulp fibers are short fibers. Those versed in the art wanting to practice the process taught Bair using pulp fibers would have been motivated to coat the surface of the web in order to reduce the likelihood of pulp fibers leaking out and reduce binder cost. Moreover, as correctly noted by Counsel, by only coating the surface of outer non-woven web also obviates the problem of a binder being inadvertently applied to the surfaces of SAP.

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As for Counsel's argument regarding Kennette et al, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Kennette et al is merely cited to show that it is old in the art to form a binder having the recited amount of dry matter. Moreover, as repeatedly noted above, the claims as presently recited do not preclude uniformly impregnating a fiber web with a binder.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (703) 308-4788. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7115 for regular communications and (703) 305-7718 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.


Sam Chuan C. Yao
Primary Examiner
Art Unit 1733

scy
July 23, 2003